



NUCLEAR DIVISION NEWS

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 4 - No. 19

October 4, 1973



OBSERVES DISCING OPERATIONS — Harry C. Francke, Y-12's Development Division, observes a discing operation on one of six cultivated plots being used in an oil disposal experiment. Francke's tests are being made to determine if the microbial assimilation method of oil waste disposal is technically and economically feasible.



'FEEDING' OIL TO SOIL — Oil wastes generated in the Y-12 Plant's production operations are disposed of by "feeding" them to natural microorganisms in the soil. The wastes are spread via this tanker onto cultivated plots. Thus far, tests have shown that the microorganisms consume the oil and dissipate it as carbon dioxide. The same disposal plots are reused at regular intervals and the oil rarely penetrates beyond a depth of six inches into the soil.

United Way---because of you

The United Way campaign opens in the Oak Ridge installations next Monday, and has been in progress all this week in the Paducah plant.

Through the years, Nuclear Division employees have responded with their dollars, their support, and, most of all, with their time and efforts, to make their communities a better place to live. We are sure this year will be no exception.

Give, not for the record's sake, or to make our company look good in the public's eye. Give not to establish new records in giving. Give because it's the sensible thing to do. Give because of you vital agencies are at work combating all kinds of social ills.

Give, because of you it's working! Give because of you, it will continue to work for your benefit, too.

Oil wastes being 'fed' to soil in field experiments in Y-12

Experiments conducted by the Nuclear Division indicate that oil and machine coolant wastes can be disposed of by "feeding" them to natural microorganisms in the soil.

The tests are being conducted by the Oak Ridge Y-12 Plant, with monitoring assistance provided by Oak Ridge National Laboratory.

The method, known as microbial assimilation, is based on the fact that over 100 species of bacteria, yeasts and fungi can oxidize one or more hydrocarbons. Several oil firms have reported success with this disposal system, but this is the first adaptation of the method to the Nuclear Division's oil waste, which is slightly contaminated with radioactive material.

Oil is consumed

The field experiments, which began this spring at the Y-12 Plant's waste disposal grounds, are aimed at finding an efficient way to dispose of approximately 200,000 gallons of slightly contaminated oil and machine coolant wastes generated annually at Y-12. Such wastes formerly were buried in drums, a costly method that required an ever-increasing use of land for burial sites.

By contrast, the new method permits natural microorganisms in the soil to completely consume the oil and dissipate

it as carbon dioxide while the chemical contaminants are trapped by the soil particles. The same disposal plots are reused at regular intervals and the oil rarely penetrates beyond a depth of six inches into the soil.

The tests, under the direction of Harry C. Francke of the materials engineering development department, are being carried out on six tilled plots about 600 feet long by 12 feet wide. They were cultivated in advance of the experiments and are tilled once a week much like a farmer tends a crop in the growing season. The plots were tilled by a tractor to a depth of six inches. This was followed by the application of nitrogen, phosphorous and potassium, which were disked into the soil.

Method seems effective

In May, the initial waste applications were made via a 5,000-gallon mobile tanker equipped with a spreader boom. Two of the plots received a total of some 7,000 gallons of oil wastes, while the other four plots received some 17,000 gallons of oil-water coolant mixture. The wastes were allowed to soak into the soil for about one day before the plots again were plowed. Thereafter, plots were plowed weekly when weather permitted.

(Continued on page 8)



SAMPLE APPARATUS SET-UP — Nelson Edwards of ORNL's Environmental Sciences Division is shown setting up sampling apparatus adjacent to the Y-12 oil disposal test site. In the background, Jackie T. McCoy, Y-12's Maintenance Division, spreads gravel for a parking area to accommodate vehicles and other equipment involved in the tests.

Nuclear Division papers set at national meetings

The machining of mirror-like surfaces on gold-plates metals was described by a Union Carbide development specialist at a national meeting recently. Harry S. Corey, Y-12's Development Division, presented a paper entitled "Laser Fusion Mirror Machining" at the Electro-Optical Systems Design Conference meeting in New York in September. He described how high-accuracy machining techniques make it possible to finish metal surface to within a tolerance of a few millionths of an inch. Such high precision, machined metal surfaces appear to have application for use as reflecting mirrors for work with lasers.

Another Y-12 development specialist, G. Louis Powell, discussed "A Method for Measuring the Hydrogen Content of Metals" at the American Society of Metals meeting in Champion, Pa., September 23-27.

A number of Union Carbide Corporation, Nuclear Division, research personnel will report on their projects at meetings in October.

William L. Greenstreet will discuss "Structural Design Technology Development for Nuclear Reactor System Components" at the Second International Conference on Pressure Vessel Technology in San Antonio, Tex., Oct. 1-4.

John G. Banker will describe "Metal-Matrix Composite Fabrication by Liquid Infiltration" at the Society of Aerospace Materials and Process Engineers at Lake Kiamesha, N.Y., Oct. 9-11.

John R. Gray and Charles W. Holland will address the Institute of Management Science at Georgia State University in Atlanta, Oct. 18-19. Gray's topic is "Economic Manufacturing Qualities for a Multiproduct, Single Facility System." Holland will discuss "The Advantages of Using Multivariate Tolerance Regions for the Certification of Related Characteristics."

Jack E. Smith and James M. Corum have authored a report entitled "Strain Instrumentation for a High Temperature Thermal Transient and Creep Test" to be given at the Society for Experimental

NUCLEAR DIVISION NEWS

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Stress Analysis meeting in Indianapolis, Ind., Oct. 19.

Stephen S. Cristy and Brian K. Annis have written a paper on "Comparison of the Ion Microprobe with Other Instrumental Techniques for Solving Surface Diffusion Problems" for presentation at the Conference on Analytical Chemistry and Nuclear Technology in Gatlinburg, Oct. 23-25.

Roy W. Morrow and Ronald J. McElhaney have authored a paper on "Determining Chromium in Industrial Waste Water by Flameless Atomic Absorption Spectroscopy" to be given at the Conference on Atomic Spectroscopy in Toronto, Can., Oct. 29-Nov. 2.

The technology described in these reports was developed at the Oak Ridge National Laboratory and Y-12 Plant.

THE LAST WORD

If you look forward to Monday more than you do Friday, you're in danger of becoming successful.

Rescue squad leader urges support for United Way efforts now underway

152892

John D. Hatmaker, an outside machinist in Y-12's Maintenance Division with 30 years of company service, has a second career that provides an inner satisfaction that most men search for — helping people as a member of the Anderson County Rescue Squad, a United Way agency.

Hatmaker, born in Claiborne County and a resident of Anderson County most of his life, lives in Andersonville with his wife Lucille. They have two sons: Mark, a junior high school student, and Gary, who also works at Y-12.

Members are selected

During his approximately 20 years in rescue squad activities he has served a number of terms as captain of the Anderson County Rescue Squad and is a past president and vice-president of the Tennessee Association of Rescue Squads, an organization which now has some 3,800 members in 88 chapters throughout Tennessee.

Discussing the Anderson County Rescue Squad, Hatmaker said, "We are just getting settled into our new headquarters on the turnpike near Elza Gate on land donated by the city. It serves as our storage area and meeting site. Our by-laws limit us to 40 members and we have a waiting list. Members are selected carefully because we are called upon all hours of the night and day to perform those emergency jobs that have to be done. It requires personal sacrifice of time away from one's family and one's regular job. The captain of the rescue squad is Haynes Day of Clinton."

Serves other areas

He explained that the rescue squad is equipped with four vehicles and several items of lifesaving equipment. The squad receives about 200 emergency calls per year in addition to the requests for participation in scheduled community or civic type activities. The emergency situations regularly include such things as recovering bodies of drowned persons, searching for children lost in the wilderness areas of East Tennessee, attempting to contain brush or forest fires until the



John D. Hatmaker

U.S. Forestry Service can mobilize fire fighting units, evacuating and giving aid to victims of fires and floods, and helping to control traffic at wreck or fire scenes until law enforcement officers can take over.

Sometimes the squad is called into other counties or states to lend a hand. The squad has searched for a missing youth in Percy Priest Lake near Nashville, has helped in locating and recovering victims from a bridge collapse in West Virginia, and helped fight a fire and control traffic in downtown LaFollette.

Funds purchase equipment

On at least one occasion the squad was requested by the Federal Bureau of Investigation to help locate and recover several stolen vehicles which had been dumped into an area lake.

The routine activities include setting up first aid stations at large public gatherings, putting on educational lifesaving programs for youth and civic groups and providing an emergency transportation system for high school football games in Oak Ridge and Clinton.

Hatmaker said United Way Campaign funds have been used by the squad to purchase lifesaving equipment and to pay for additional lifesaving training. "All our members have received the basic instructions in lifesaving, but thanks to the United Way, we can afford to send several squad members to a special course in emergency medical services at The University of Tennessee."

Aids Holiday Bureau

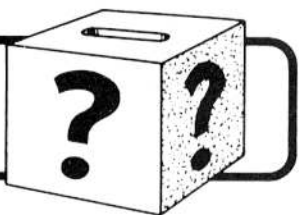
He pointed out that his experiences with the squad have given him a great appreciation for the other member agencies of the United Way. The squad frequently is involved in projects with such groups as the Boy Scouts, Daniel Arthur Rehabilitation Center, Red Cross, Mental Health Center, Boys' Club and the Holiday Bureau. He remarked that he, along with other squad members, probably receive their greatest satisfaction in packaging and delivering Holiday Bureau toys to children in needy homes.

Despite the fact that the emergency jobs occasionally involve some amount of personal risk, Hatmaker received perhaps his most serious injury as a squad member while performing a rather routine task. "One evening I was giving a demonstration on life-saving equipment to a group of Boy Scouts in Lake City. I returned to my truck to pick up a piece of equipment, fell down in the dark and fractured a leg. The Boy Scouts had to rescue me!"



NEWLY CERTIFIED — Now certified as licensed professional engineers in the State of Tennessee, these Y-12ers add to the long list of engineers so licensed in the Nuclear Division. Seated from left are Douglas O. Colclasure, Charles F. Klein, Fred W. Harmon, Dorothy B. Sneed, Donald E. Shearl, John N. Turpin and William M. Warmbrod. Standing are Charles R. Kasperek, Lynn B. Cabe, Allen H. True, William J. Mason, Fred Wetzel, James A. Stanton, Thomas O. Morris, Alvin J. Norris, Thomas E. Smith, John W. Smith and Bryant B. Bowden.

QUESTION BOX



If you have questions on company policies, benefits, etc. or any other problems with which we might help, just let us know. Drop your inquiry to the Editor, Nuclear Division News. (Or telephone it in to your plant news representative . . . see page two). You may or may not sign your name. It will not be used in the paper.

Questions are referred to the proper authorities for accurate answers. Each query is given serious consideration for publication.

Answers may be given to employees personally if they so desire.

QUESTION: Why doesn't the Oak Ridge Gaseous Diffusion Plant management devote some attention to an important item such as the current parking situation? Under the present system, it is irritating, frustrating and downright dangerous.

ANSWER: ORGDP management is certainly aware that some of its parking facilities are inadequate to meet the present needs generated by its increase in employment. They intend to alleviate the present crowded situation within the next few months by converting substantial areas into additional parking facilities. In addition, they plan to rearrange their present parking facilities to provide additional parking spaces and, as you may have observed, they have already designated motorcycle parking areas at each portal to free regular parking spaces for automobiles.

QUESTION: When the minimum hire-in salary for the various classifications of clerical employees is raised, is any allowance made for this increase for those employees already hired? It seems that some new employees are making as much money or more than those with several years of experience in the same classification.

ANSWER: Starting rates are reviewed annually. If starting rates are increased the effect of the increase is normally included in the next merit increase of those employees at or near the starting rate.

Paducah's Harper named to top post in masonry

Norman L. Harper, Fabrication and Maintenance Division at the Paducah Gaseous Diffusion Plant, has been elected grand high priest of the Royal Arch



Harper

Masons of Kentucky. He was named to the 1973-1974 post at the annual meeting of the Grand York Rite Bodies recently in Louisville.

Harper has served as master of lodge 419, Tunnel Hill, Ill.; high priest of the Paducah chapter; Royal Arch Masons, master of Paducah Council; Royal and Select Masters and various other appointed and elective offices. He is also president of the Shrine Club in Paducah.

A Navy veteran, Harper lives at 231 Colonial Drive, Paducah. He and his wife, Carmen, have two children, Sondra and Paul.

QUESTION: How long has the present shift premium for shift workers been in effect? I know it has been the same amount for many years and cannot understand why it has not been improved. Considering the sacrifices one makes regarding his family activities, and, sometimes health, I am disappointed that the company has fallen behind in this category.

ANSWER: The present shift premium rates were established in late 1961 and early 1962. Area shift premium pay practices are surveyed periodically to determine the comparability of our premiums. Although the last improvement was a long time ago, our shift premium rates still compare favorably with others being paid in our area.

Next Issue

The next issue will be dated October 18. The deadline is October 10.

WHAT WE COULD DO

Right now, without learning a new thing from the research laboratories we could save over 100,000 additional lives this year from cancer, if everyone got the American Cancer Society's message about the importance of early diagnosis and prompt, proper treatment, and had regular health checkups.



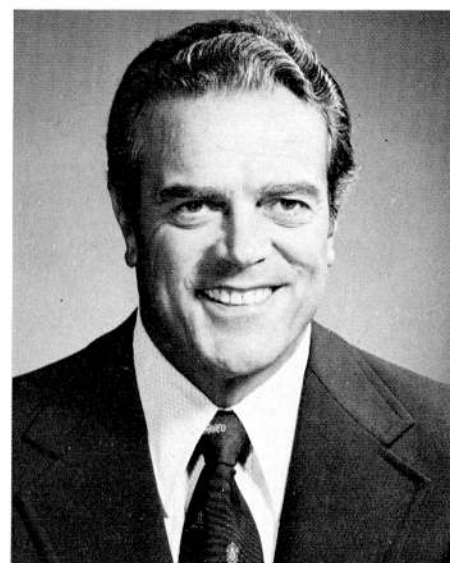
PRESIDENT VISITS — William S. Sneath, President of Union Carbide Corporation, was the principal speaker at a recent annual recruiters' workshop. Above, he addresses the recruiters at the Hyatt Regency in Knoxville. Lloyd M. Cooke, Manager of University Relations and Professional Recruiting and Corporate Director of Urban Affairs, is seated at left. Roger F. Hibbs, President of the Nuclear Division, also addressed the three-day conference, which was attended by 45 Union Carbiders representing various divisions throughout the corporation. Sneath spoke on development opportunities within the corporation.

ORNL's Patriarca named fellow in American Society for Metals

Peter Patriarca, manager of LMFBR Fuels and Materials programs and section head in the Metals and Ceramics Division at ORNL, has been elected a Fellow of the American Society for Metals. The honor represents recognition of distinguished contributions in the field of metals and materials, and develops a broadly based forum for technical and professional leaders to serve as advisors to the Society. The honor was conferred on Patriarca at the ASM Annual Meeting, October 2, in Chicago.

Patriarca, who joined the ORNL staff in 1950, organized the welding and brazing laboratory in the Metals and Ceramics Division. He holds B.S. and M.S. degrees in metallurgical engineering from Rensselaer Polytechnic Institute. He was employed at RPI as a research fellow for two years.

Among Patriarca's contributions at ORNL are: development of fabrication procedures for the ANP Program, which included the Aircraft Reactor Experiments' heat exchangers and sodium-to-air radiators; pressure vessel technology and fabrication and procurement of fuel elements for the EGCR; and development of



Peter Patriarca

welding procedures for fabrication of MSRE vessel and piping.

Patriarca is currently responsible for the materials R&D in support of the FFTF pressure vessel and piping, and the LMFBR demonstration plant steam generators. He has authored and coauthored over 50 scientific papers and has six patents.

Patriarca is past chairman of the Oak Ridge Chapter of ASM and the Metals Handbook Committee on Definitions. He is also a member of the Society of Sigma Xi and the American Welding Society. In 1970, he received the AWS National Meritorious Certificate Award.

He and his wife, Virginia, reside in Knoxville. They have two sons, a daughter and two grandchildren.

Calendar of EVENTS

TECHNICAL October 4

Oak Ridge National Laboratory Information Colloquium: "Lung Cancer Studies at ORNL," Paul Nettesheim. Informal discussions by Floyd L. Culler on various subjects of current interest to the staff, and a question and answer period. Admission by badge only. Jefferson Junior High School Auditorium, 7:30 p.m.

October 8-10

Health Physics Division Information Meeting: Oak Ridge National Laboratory.

October 11

Biology Division Seminar: "Evidence for the Involvement of Unsaturated Fatty Acids in the Initiation of Chromosomal Replication in *E. coli*," Joe Fralick, Florida State University. Tower 1 Conference Room, Building 9207, 3:30 p.m.

October 15

Salt Mine Repository Project Seminar: "Experience with Radioactive Waste Disposal Operations in a Salt Mine," Klaus Kuhn, Institut für Tief Lagerung Clausthal-Zellerfeld, Germany. East Auditorium, Building 4500N, 9 a.m.

COMMUNITY October 19-20

The Unitarian Handicraft Fair will be held at the National Guard Armory on the Turnpike. Hours on October 19 are from 10 a.m. to 9 p.m., on October 20 from 10 a.m. to 4 p.m.

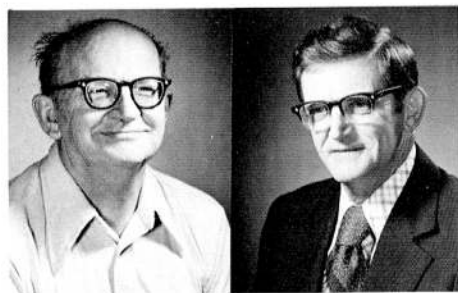
COMPANY Service

20

25

30

ORNL 30 YEARS



Coveyou

Lynn

Several ORNL employees will reach the 30-year mark during October.

Robert R. Coveyou, Computer Sciences Division, is a native of Detroit, Mich. He received the B.A. and M.A. degrees from the University of Chicago and The University of Tennessee, respectively. Coveyou and his wife, Ida, live at 104 Stanton Lane, Oak Ridge.

E. Cecil Lynn is a chemist in the Analytical Chemistry Division. A native of Cookeville, Lynn's hobbies are fishing and photography. He and his wife, Catherine, have a son and a daughter. They live at 106 West Magnolia, Oak Ridge.

John S. Drury is in the Chemistry Division.

Robert R. Hall works in the Thermodynamic Division. He is a native of Eastern Kentucky.



Jenks

Glen H. Jenks, Chemical Technology Division, is originally from Lansing, Mich. He received the Ph.D. degree from Northwestern University. Jenks and Barbara, his wife, reside at 369 East Drive, Oak Ridge. They have two daughters.

Ernest M. Lees came from the University of North Dakota to join Tennessee Eastman 30 years ago. He is now in the procurement department of the Reactor Division.

Alfred R. Jones, George F. Wells, Billy C. Leslie, Jack C. Rose, Myron F. Fair, Robert B. Splittgerber and Charles A. Wallace.

20 YEARS

Lawrence A. Howard, Barbara C. Farris, Kenneth E. Cowser, Thomas N. Hart, Margaret E. Carmody, Robert W. Stelzner, Clyde E. Greenway, John E. Cornelius Jr., Cleave C. Brooks, W. E. Browning Jr., Inez W. Hodge, Donald D. Pair and Hurchel W. York.

PADUCAH 20 YEARS

Ollie T. Griffin, Jack L. Freeman, Charles A. Lamb and Jerry A. Howell.

Y-12 PLANT 30 YEARS

Four additional Y-12ers cross 30-year landmarks with Union Carbide Corporation early in October.

Margaret C. Baker, chemical services in the Metal Preparation Division, lives at Route 23, Crenshaw Road, Knoxville.

Sylvia P. Hatmaker, Beta Two chemistry, lives at Route 23, Beaver Creek Road, Knoxville.

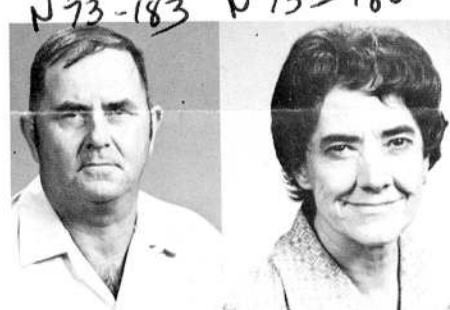


Mrs. Baker

Mrs. Hatmaker

Clifton E. Herrell, a native of Heiskell, lives at Route 3. He is in Y-12's chemical services.

Helen J. McNew, a native of LaFollette, is in Y-12's civil and architectural engineering. She lives at 140 Vandalia Road, Oak Ridge.



Herrell

Miss McNew

25 YEARS

Thomas B. Hendrix.

20 YEARS

James W. Reece, Jay S. Oakwood, Kenneth E. Lewis, Horace S. Cook, Leon M. Bray, Milton Settle, William H. Renfro, James A. Davis, Lester J. Adkisson, Coy V. Copeland, Alfred R. McConkey, William E. Thomas, Reece Robbins and Thomas W. Compton Jr.



Wilson

Ralph L. Wilson Jr., wage and salary administration, is a native of Columbia, Tenn. He and his wife, Helen, live at 110 Temple Road, Oak Ridge. They have a son and a daughter, and two grandchildren.

25 YEARS

Jesse A. Duff.

96 ORNL employees take prizes as plant draws for safety awards



DEEP CONCENTRATION — Some employees at ORNL listen attentively during the safety award drawing which was held recently.

The Oak Ridge National Laboratory has passed its second 120-day period without a loss time injury under the safety incentive program.

A total of 96 items were awarded to employees at a drawing held September 14. Winners of the top ten prizes were Bert W. Rust, color television; Arnetta M. Crabtree, microwave oven; Othella Wilson, color television; Guy Jones, sewing machine; J. C. Poole and Brena K. Stevens, radial tires; Wesley D. Arnold and Jeannette H. West, electric typewriters; Claude T. Long, \$200 savings bond; and Richard Moore, gas grill.

Other winners included: Edward M. King, Noble H. Rouse, Edmond C. Fearnow, Willie A. McCloud, Richard E. Reed, Gene T. Conner, M. Loretta Fitzpatrick, Herbert G. Smallman, Jimmy P. Vineyard, James T. Hughes, Anthony C. Schaffhauser, Gerald Alton, Alva M. Baker, Richard C. Shipwash, Henrietta R. Hendrickson and A. Edmond McNeil.

Ray H. Henry, Dvon Brogan, Comer C. Hall, Paul A. Haas, Clarence J. Hochanadel, J. Robert Hightower, Robert M. Freestone, Elbert T. Deaderick, William J. McDowell, Herbert L. Hodge, Charles E. Klabunde, Carl E. Lawson, Mary H.

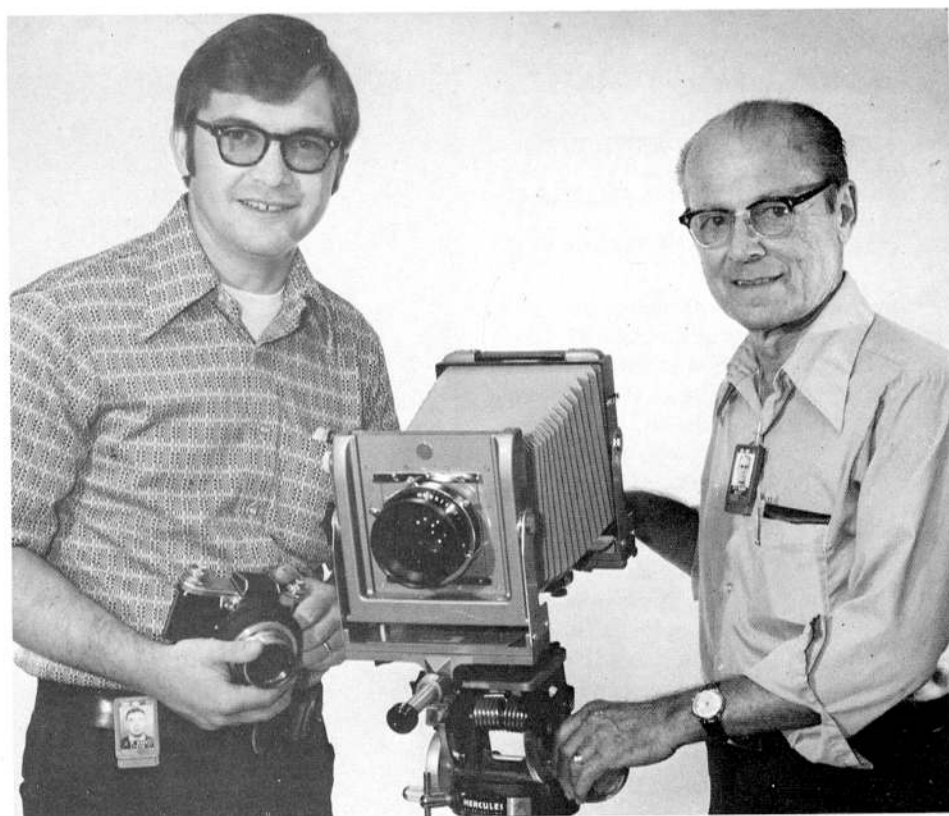
Bailey, Edd Bryant and George R. Archer.

Harold C. Davis, Ananias C. Burger, John A. Whitehead, Ted H. Rector, Walter E. Ford, Alonzo R. Huffstetler, Donald D. Walker, Obie B. Bridges, Ruby E. Sharp, James P. Turner, Harve A. Dalton, Haskell Swearingin, C. Elmo Wolfe, Ted C. Russell, Joseph E. Ratledge, Robert E. Alexander, Charles R. Hackler and John T. Walker.

Billy F. Early, Hal M. Butler, William E. Shockley, John S. Faulkner, Thomas R. Steele, James E. Attrill, Billy E. Foster, Charles E. Hall, James R. Rhodes, William C. Stoddart, Elliott D. Carroll, Leonard C. Williams, Robert F. Stone, William E. Kinney, Robert P. Rosenbaum and Paul F. Swaggerty.

Clifford A. Burchsted, Herbert G. Duggan, Willard Martin, Billie S. Sams, Charles H. Perritt, Theodore R. Mueller, Shafik K. Iskander, Bruce W. DeArmond, D. W. Moses, Jack C. Ogle, Robert W. Stelzner, Kenneth W. Donham, Charles T. Carney, Ruth Slusher and William B. Malthouse.

Boss Davidson, David K. Holmes, Alford J. Wells, Freddie L. Timmons, Lewis A. Byrd and William E. Terry.



METALLOGRAPHY PHOTOGRAPHERS — J. W. Nave, left, and Wallace Denny, right, of ORNL's Metals and Ceramics Division, were recognized by the Tennessee Professional Photographers Association at its annual convention in Jackson, Tenn., recently. They received four "Second Award of Excellence" ribbons for photographs in the industrial, portrait and unclassified categories. The winning photographs will be used by libraries, museums, schools, state fairs, etc., as part of the TPPA Traveling Loan Exhibit.

2-102-73



"WELL, THIS IS IT" — Robert L. Atchley of the Fire and Guard Department shows his family the complicated works on his fire truck during family day at ORNL recently. At right, Lori tries on her daddy's hat for size.

5,000 plus attend ORNL open house September 9

The first "family day" open house to be held at ORNL since 1967, went off smoothly on September 9. Not even the rains kept the 5000-plus people from visiting the facilities which were open.

One of the most popular attractions involved the computer facilities located in the 4500 Building, ORELA, Instrumentation and Controls Division and in the High Voltage Laboratory. Youngsters of all ages watched pictures of Mona Lisa being printed, punched souvenir cards, listened to the computers play electronic music, and even got a chance to land an Apollo space ship.

Many divisions featured exhibits of their work.

PADUCAH GOLF TOURNAMENT

Paducah's season-ending mixed scramble golf tournament has been scheduled for October 13, at the Village Greens Course at Kentucky Dam Village State Park.

Deadline for entry is 12 noon October 10. This is a FUN tournament with contests and special events. Employees may enter by calling the Recreation Department on PAX 335 or BELL 368.

Nuclear Division Deaths

FORMER ORNL EMPLOYEE

Wilson Owens, formerly employed at the Oak Ridge National Laboratory, died September 22. The Owens' home is in Oak Ridge. Funeral services were held September 24 in the chapel of Weatherford Mortuary with the Rev. Dennis J. Ward officiating. Burial followed in Oak Ridge Memorial Park.

FORMER Y-12 PIPEFITTER

Dorwin H. Dinsmore, a former pipefitter in Y-12, died September 8 in the Veterans Hospital in Johnson City. Mr. Dinsmore also worked in the Paducah Plant. He made his home with a son, Stanley Dinsmore, in Norris.

Edwin D. Kerns, Finance and Materials Division at ORNL, died September 11 in a Rockwood hospital. Mr. Kerns, a property inventory clerk, had worked at ORNL for over 25 years.



Mr. Kerns

Survivors include his parents, Mr. and Mrs. Arthur Kerns, Rockwood; a brother, James S. Kerns, also employed by ORNL; and three daughters, Mrs. Margie Rodgers, Mrs. Sharon Miller and Mrs. Gail Haynes, all of Ohio.

Funeral services were held at Booth Funeral Home in Rockwood. Interment followed in Oak Grove Cemetery.

'Origins of moon' talk set by Urey for ACS

The East Tennessee Chapter of the American Chemical Society is sponsoring the Lind Lecture series next week. Harold Urey, who was awarded the Nobel Prize in Chemistry in 1934, will speak on "Origins of the Moon."

Urey will speak at The University of Tennessee's Buehler Hall at 3 p.m., October 8.

He will also speak at Oak Ridge on October 9 on the same subject. The dinner meeting will begin at the Holiday Inn at 6:15 p.m. Reservations must be made by October 5, and can be made through Betty Powell, extension 3-3324.

Carl T. East, Y-12's Metal Preparation Division, died recently at his Oliver Springs home. He had worked in the Y-12 Plant since 1953. A native of Rhea County, he served in the U.S. Army during World War II. He worked as a painter until he joined Union Carbide, continuing painting and wood-working as a hobby.



Mr. East

Mr. East is survived by his wife, the former Mary Owens, two daughters, Linda Sue and Carla

Yvette; four sisters; his father, A. V. East; a brother; and his stepmother, Mrs. Nannie East.

Funeral services were held at the First Baptist Church, Oliver Springs, with the Rev. E. C. Sorey officiating. Burial followed in the Anderson Memorial Gardens.

October is United Way time for Union Carbide employees. Are you giving your needed share?

WARNING SIGNAL

The woman over 40, the woman in her change of life, should be alert to unusual bleeding or discharge. It's probably not, but could be a sign of uterine cancer — but only a physician can make the diagnosis. Give him a chance, urges the American Cancer Society.



DIVISION EARNS ACCOLADES — Y-12's Product Certification Division was cited recently for operating 11 years without a disabling injury, accumulating almost 11 million man-hours, one of the best records ever recorded in Y-12. The division has had a zero serious injury frequency rate for calendar year 1972, also. Jack M. Case, Y-12 plant superintendent, left, presents N. Kenneth Bernander, division head, with a plaque; as William J. Wilcox Jr., Technical Director, looks on from right.



ONE CAMPAIGN
INSTEAD OF MANY

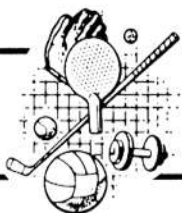
- ① SAVES CAMPAIGN COSTS
- ② SAVES YOU TIME
- ③ SERVES YOUR COMMUNITY EFFICIENTLY

**Thanks to you
it's working**



**The
United Way**

RECREATIONOTES



FAMILY-STYLE PICNIC — ORNL's C Shift recently staged a family-style picnic at the Clerk Center Recreation Park. They enjoyed playing games, good conversation, and "overeating," according to many of those attending.

Y-12 BOWLING

The Mix-Ups broke into an early lead in the C Bowling League recently, two points ahead of the Big Five and the Royal Flush. J.C. Bryan, Rounders, rolled a 253 game recently... as Del Ducay on the Mini-Strikes rolled a 704 handicap series.

The Ridgers, Rebels and Splinters share the lead in the Classic Bowling League, each team with only one loss. The Playboys' Joe Smyrl posted a 237 game recently.

The Y-12 Mixed League sees the Rollers and Splinters tied for first place, each with only two losses. C. R. Lively, Rollers, rolled a 240 game during early days of the league's race.

ORGDP BOWLING

The Planners grabbed an early lead in the Wednesday night league, losing only one game thus far. Dave Phillippi rolled a 241 game recently to spark bowlers.

The ORGDP Women's League puts the Payoffs on top early in the season, with no losses. Shirley Yaggi recently rolled a 643 scratch series.

The Tuesday league belongs to the Double X team, barely ahead of the Mishaps. Jim Shoemaker, rolling on the top-seeded team, posted games of 217 recently, boosted to a 254 handicap game... and series of 560, 671.

PISTOL LEAGUE

Final winners in the .22 caliber pistol league were E. T. Johnson, with a 280.600 score, followed by J. Brewer, with 274.143 and T. Lemons, with 272.111. Handicap highs went to Gordon Jones, J. F. King and R. H. Ward in that order.

FISHING OUTING

A group of Y-12ers, B shifters, along with some H & J men, recently took off for their annual Panama City junket. Two days and one night were spent about 60 miles off the Florida coast. Y-12ers reported a catch of about 1,600 pounds of fish!

ORNL BOWLING

The Limits grabbed an early lead in the A League, six wins and no losses. The Half Frames' West went through with a 226 game on a recent night.

In the C League, the big scores belong to the Alley Rads. In recent rolling, however, the Damagers put a 3125 handicap series on the books. Dave Joy had a 646 scratch series recently... counting them as follows: 265, 212 and 169.

The ORNL Ladies League puts the Pick-Ups out front with a perfect score thus far. Sally Stockstill, on that team, recently rolled a 221 game.

In the Family League it looks like a tie between the Oops and the Lucky Strikers. Dan Kessell rolled a 565 scratch series recently; Tillie Plaza put a 525 up.

PATENT

To Ora B. Morgan Jr., ORNL, for "Multi-Ampere Duopigatron Ion Source."



RUNNERS-UP IN SOFTBALL — Tom's Gizzards came in second place in the just-finished Softball League. Kneeling from left are, Tom Grizzard, Tim Heiskell, Bill Size, Bob Stafford, Milford Payne and John Murphy. Standing are Connie Strike, Charles Dunn, Wayne Parsons, Jim Treadwell, Paul Hatmaker, Ray Nabors, Eddie Bailiff, John Csurny and Kent Dixon. Dennis Nabors was absent for the photograph.

Fire Prevention Week Oct. 7-13



FIRE HURTS — Chairman Robert C. Riepe of the Paducah Plant has set October 7-13 as Fire Prevention Week there. Observation of the week will also take place in the other three Nuclear Division plants.

On October 9, 1871, a devastating fire raged through the city of Chicago destroying 17,430 buildings and killing 250 people. In commemoration of this, the worst fire in American history, each year during the week of October 9, the National Fire Protection Association observes Fire Prevention Week. Fire Prevention Week will be observed in the Nuclear Division plants, October 7-13, 1973. The plants will have various programs to emphasize fire safety.

The great Chicago fire started in a barn owned by Mrs. O'Leary and legend has it that Mrs. O'Leary's cow kicked over a

lantern initiating the fire which caused an estimated 170 million dollars damage. In all fairness to Mrs. O'Leary's cow, most fires are started by people. People overload electric circuits, abuse heating and cooking appliances and smoke cigarettes and use matches (the three main causes of fires).

The Nuclear Division reminds its employees that "Fire Hurts." It consumes our savings, kills our families and destroys our jobs. So remember at home, at work and at play, make every week Fire Prevention Week; "Don't give fire a place to start."

National credit union head to speak at dinner

The Oak Ridge Chapter of Credit Unions will celebrate Credit Union Week with a dinner at the Oak Ridge Country Club October 15.

Special speaker at the meeting will be General Herman Nickerson Jr. (USMC - Ret.), administrator of the National Credit Union Administration.

Seventeen credit unions are represented in the Oak Ridge Chapter, including three from the Nuclear Division. The social hour begins at 6:30 p.m. Monday.

WANTED



Y-12 PLANT

RIDE from Raccoon Valley Road, above Claxton School, to West Portal, straight day. W. H. Foust, plant phone 3-5068, home phone Claxton 945-2570.

ORNL

RIDE from East Knoxville, Linden area, to East Portal, 8 a.m. shift. Wanda Jenkins, plant phone 3-6495, home phone, Knoxville 637-2896.

CAR POOL MEMBERS from Waddell, West Outer or Pennsylvania Avenue area, Oak Ridge, to East or North Portal, 8:15 a.m. shift. Tom Burnett, plant phone 3-6939 or Oak Ridge 483-1975; or Dick Reed, plant phone 3-1901 or Oak Ridge 483-3458.

JOIN CAR POOL from South Knoxville (U.T., Papermill Road or Bearden area) to East Portal, either shift. Lynne Boggs, plant phone 3-1411 or Knoxville, 573-8698.

JOIN CAR POOL from Karns area to East Portal, 8 a.m. shift. John Groover, plant phone 3-6417 or Knoxville 584-2438.

ORGDP

RIDE from Lovell Road exit or from Hardin Valley Pike to ORGDP, Portal 2. Gladys Hurst, plant phone 3-9628, home Concord 966-9965.

Payroll purchase of the U. S. Treasury bonds is the easiest way there is to save.

The Medicine Chest

(Editor's Note: Dr. Lincoln alternates his regular column with "The Medicine Chest," where he answers questions from employees concerning their health in general. Questions are handled in strict confidence, as they are handled in our Question Box. Just address your question to "Medicine Chest," NUCLEAR DIVISION NEWS, Building 9704-2, Stop 20, or call the news editor in your plant, and give him your question on the telephone.)

By T. A. Lincoln, M.D.

QUESTION: "You have written articles stressing the dangers of taking too many aspirins. Recently Ralph Nader criticized the seltzer-type patent medicines taken by millions of Americans. Are they as bad as aspirin?"

ANSWER: To answer this question one needs to know whether the seltzer medication is being taken primarily to relieve indigestion or pain. If headache or rheumatic pain is the problem, the aspirin content of such a preparation is usually the equivalent of a little over one five-grain aspirin tablet. With a seltzer preparation a higher plasma level is achieved

somewhat faster than after taking a plain aspirin tablet.

If relief of "acid indigestion" is the problem, the seltzer preparation will neutralize gastric acidity rapidly since it contains sodium bicarbonate and sodium citrate. The effect is short-lasting and frequent use of an absorbable antacid may disturb the blood chemistry, leading to increased acid secretion. A non-absorbable antacid, such as aluminum and magnesium hydroxide combinations, is much preferred for chronic use.

Aspirin is bad for the stomach and people with chronic stomach trouble should avoid its repeated use. It is a potent gastric irritant and can cause bleeding and gastritis. When pain is the problem, aspirin taken in a seltzer is usually 10 to 20 times more expensive than in the tablet form. (Somebody has to pay for those expensive TV commercials!)

The seltzer preparations are obviously useful but are expensive and potentially hazardous. They are best suited for acute problems like a headache or a hangover. Ralph Nader probably wants to protect people from themselves, but he should realize that they need relief, they don't much care about hazards, and don't seem to mind paying the high price.

QUESTION: "What is your philosophy, as a physician, toward terminally ill people being given the facts of their condition?"

ANSWER: I feel strongly that patients with terminal illnesses should be told of their condition. In some cases, where they could expect to have several years relatively free from symptoms, withholding this information for a while is better. Many patients are justifiably angered and depressed when they gradually realize their families and physicians are obvious-

ly not telling the truth. People facing death need time to put their affairs in order. If they have a few months when they can still get around, they may wish to visit friends and relatives or even write down some last wishes. If they do not know until they become so ill that the secret can no longer be withheld, they no longer are able to make their own personal adjustments. Although such an adjustment is initially extremely painful and depressing, it is remarkable how calmly and serenely many people eventually face death. Those who have loved and been loved and felt their lives have had some meaning, can face the last great event with a composure and resignation that is comforting to the grief stricken relatives. Denying people the opportunity to make this peace is, in my opinion, cruel.

QUESTION: "Is there danger from too much sun?"

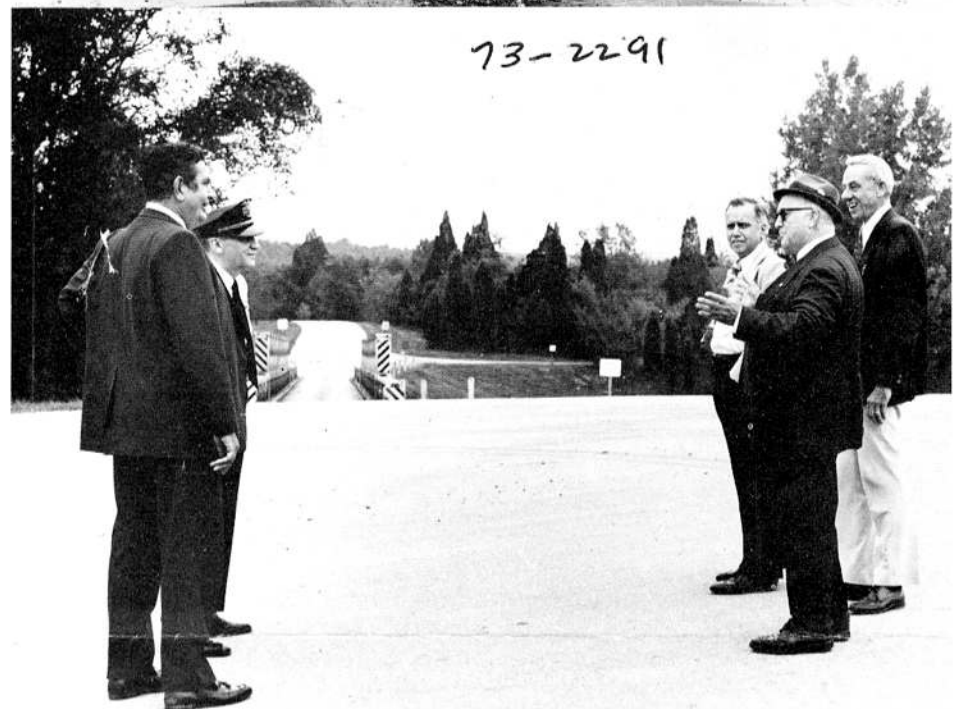
ANSWER: Prolonged exposure to sunlight is obviously dangerous. Anyone who has had a severe sunburn knows that. In addition, years of exposure to sun causes premature aging and degeneration of the skin. It can also cause premalignant keratoses and skin cancers.

Individuals who have little pigment in their skin are much more vulnerable to skin cancers. Blondes, especially those who do not tan, strawberry blondes and redheads are deficient in the pigment melanin. Individuals with adequate pigment become tanned, providing them with protection against sunburn. However, tanning, no matter how dark, does not necessarily prevent injury. Almost all of the skin cancers, except of course melanomas, occur in skin which has had years of sunlight exposure; namely, the face, ears, neck, hands, and forearms. Skin exposed for many years to sun becomes rough, dry, wrinkled, and eventually thin.

Since East Tennessee residents seem to get relatively little weekend sun, recreational exposure for brunettes is of relatively little concern. The smart, however, wear a cap with a sunshade when they go fishing. They don't lie out baking in the sun for hours at a time when they already have a tan. They use a sunscreen cream to protect their noses. Outdoor workers learn to cover up the best they can.

RETIRED Y-12ER DIES

Bernie W. West Sr., Karns, a former Y-12 machinist, died September 8 at his home. Survivors include his wife, Mrs. Lura B. West; two sons, Kenneth P. West, and Bernie W. West Jr., who also works in Y-12; five daughters, Mrs. B. M. Sanders, Mrs. H. L. Cole, Mrs. D. L. Hudson, Mrs. B. F. Easter and Mrs. J. H. Nokes. Three brothers and a sister also survive.



STUDY TRAFFIC PROBLEMS — With the increased flow of traffic around the Oak Ridge Gaseous Diffusion Plant, plant officials recently met with city officials to determine steps that could be taken to alleviate hazards on the surrounding roads. In the top photograph, from left, Robert L. Newton, shift supervisor coordinator; D. S. "Nick" Pesce, Engineering Division; Mayor Al K. Bissell; Robert A. Winkel, plant superintendent; and Chief of City Police C. T. Vittel, examine one of the newly installed stop signs near the entrance of ORGDP. In the lower photo the group discusses the narrow, one-lane bridge that crosses Poplar Creek, behind ORGDP. Several accidents recently in the area have stressed the need for action on all levels to reduce potential perils in the traffic flow. Employees, particularly those at shift change, can verify the congestion and problems that arise in coming to and from work.

Egner named chairman for Clinton UW drive

Larry Egner, Metals and Ceramics Division at ORNL, is chairman of the 1973 United Way Campaign in Clinton.

Egner and his staff will be cooperating with the other cities in Anderson County to reach a goal of \$350,000. This amount is needed to support the 23 agencies and two chapters of the Red Cross in Anderson County during 1974.

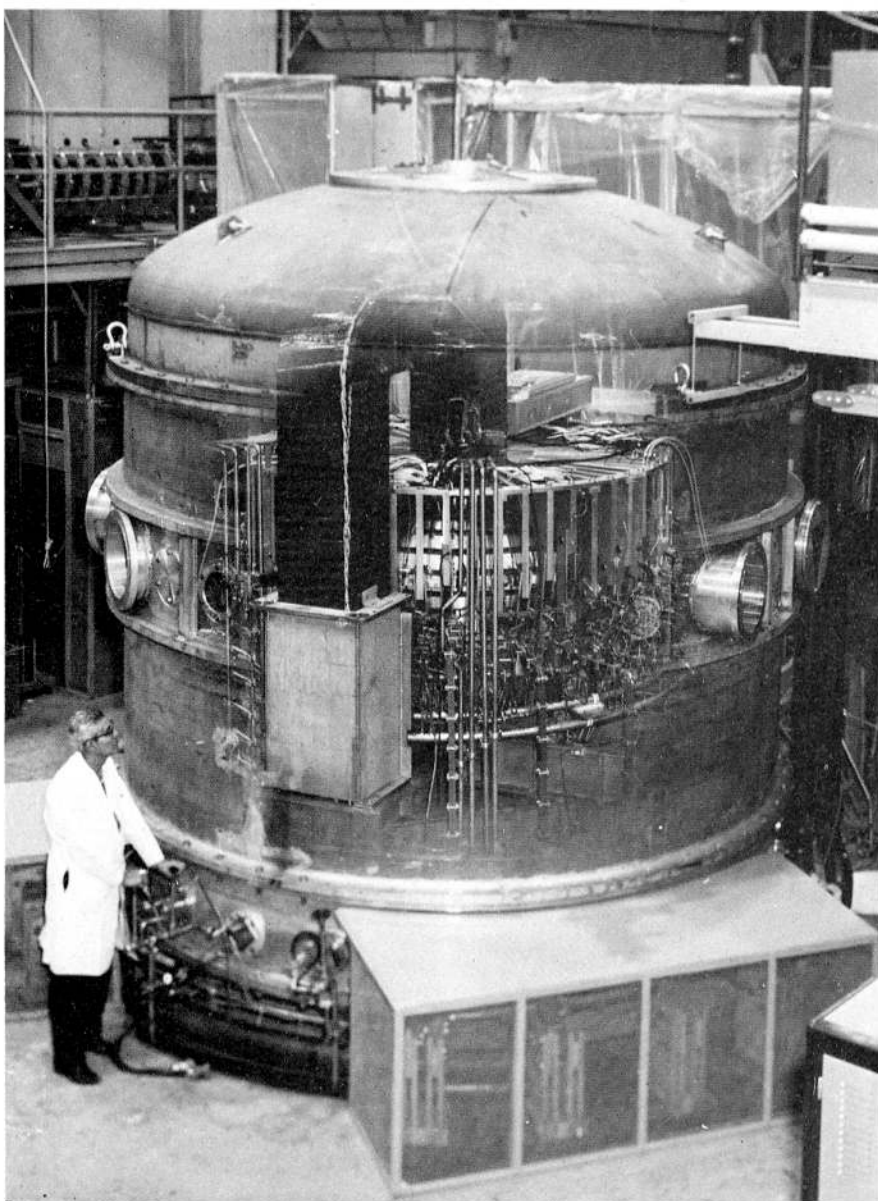
NOTE OF INTEREST

Harry E. Seagren, director of the Plant and Equipment Division at ORNL, was recently elected secretary of the Knox Area Chapter of the American Institute of Plant Engineers.

Members of the local chapter represent a variety of East Tennessee industries and are involved in design, layout, construction, operation and maintenance of plant facilities.



LEXINE MILLER SCOTT — Lexine Miller, Physics Division at ORNL, recently became the bride of Lester Scott. The ceremony was performed by the Rev. Manfred A. Polk at the Cathedral of Deliverance in Knoxville. The Scotts reside in Knoxville at 222 Cansler Street.



TRICK PHOTOGRAPHY IN RESEARCH — This photograph of ORMAK was made by double exposure using a matte-box in front of the camera lens, in much the same way that trick movie scenes were made years ago. The photograph was conceived by Wallace Tillery, and made with the assistance of Ward Bandy, both of the Photography Department. It was used instead of the usual before and after shots.

Photographers use 'trick movie' method

The value of using trick photography in research has been shown by personnel in ORNL's Photography Department.

A double exposure was made of ORMAK (the Oak Ridge Tokamak, a controlled fission experiment). A matte box was used in front of the camera lenses. The camera was set on a high, stable platform and the matte box was adjusted to make an exposure of the inner works of ORMAK before the dome was installed. Only the center of the film was exposed.

After the dome was in place, another mask was put in the matte box to hold back exposure of the center of the film. A second exposure was then made of the dome and surrounding area.

The double-exposure photograph of ORMAK was conceived by Wallace Tillery to be used instead of the usual before-and-after shots. Ward Bandy assisted Tillery in making the photograph.

This photograph is one of the most popular prints ever made by ORNL photographers. Requests for copies have been received from all over the world. The photograph has been used in numerous publications, and has appeared on the cover of Science magazine.

United Way giving is the easiest, best way to make sure your money goes to a worthy purpose.

Patents granted

To James M. Leitnaker and Karl E. Spear II, ORNL, for "Stabilized Uranium or Uranium-Plutonium Nitride Fuel."

To James C. Mailen, ORNL, for "Rotor for Multistation Photometric Analyzer."

Wolfe son awarded ROTC scholarship

Steven Wolfe, son of Billy T. "Red" Wolfe, Paducah's Plant Engineering Division, has been awarded a full four-year scholarship for the U. S. Navy ROTC at the University of Louisville. The ROTC



Wolfe

Wolfe graduated from Mayfield High School with high honors, and was active in church and community projects. He is a member of the National Honor Society, a member of Boys' State and an Eagle Scout.

will include regular training during the academic year and six weeks summer cruises. On graduation, Wolfe will be commissioned an officer in the Navy.

The scholarship is based on leadership, scholastic records and physical fitness.

Division Retirees

Three ORNL employees retired in September.



Meservey

Albert B. Meservey retired with over 26 years of company service. He was a research staff member in the Chemical Technology Division. Meservey is square dancing and making improvements around his home. He and wife, Janet, also enjoy traveling and camping. They have a daughter who lives in Iowa and a son who teaches in Canton, N.C.



West

Carlos G. West, Chemistry Division, had worked at ORNL for over 29 years. Following retirement, West plans to do some flower gardening and visit friends and relatives. Originally from Rutledge, Tenn., West is married to the former Mary Reed. They reside at 2410 Cecil Avenue, N.E., Knoxville.

E. H. "Joe" Scisson, Plant and Equipment Division, retired with over 23 years of company service. Scisson plans to devote more time to civic activities. He is a member of the Rescue Squad and Shriner's Club in Monroe County. He lives at Route 1, Sweetwater.

Oil wastes studies

(Continued from page 1)

Since that time, 44,000 gallons of wastes, which included about 9,700 gallons of oil and over 35,000 gallons of coolant, have been applied to the plots. Thus far, according to Francke, the method appears to be working very effectively.

He estimates that during the dry summer months the two plots designated to receive oil wastes can accommodate up to 3,000 gallons per month per plot, while the other four plots can absorb up to 5,000 gallons of coolant wastes per week for each plot.

Francke points out that prolonged wet weather may slow the rate of dissipation and estimates that smaller amounts of waste will be poured during the winter months when the ground remains wet and the cold weather slows the microbial metabolism. Even with these limiting factors, however, he believes the present test plots alone could accommodate most of the oil and coolant wastes generated annually at the Y-12 Plant.

ORNL's Environmental Sciences Division is assisting in the experiment by monitoring the respiration rate of carbon dioxide from selected test plots by performing various types of analyses. These tests, under the direction of Frank Harris and Nelson Edwards, aid in determining the rate at which the microorganisms are dissipating the waste.

Analyses also have indicated that the disposal system does not cause any harmful effects to the natural environment.

COMPANY Service

20 25 30

ORGDP
20 YEARS

Jimmie J. Turner, Lynn F. Lockett, Lewis M. Koon and Henry M. Noritake.

GENERAL STAFF
20 YEARS

W. Charles Kuykendall, James A. Gill-crist and W. T. Carter.



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